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Docket No.: KCC-16,221

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants: Lori Tassone HOLMES, et al.

Serial No.: 09/939,535

Filing Date: 24 August 2001

Title: THIN, HIGH CAPACITY MULTI-
LAYER ABSORBENT CORE

Customer No. 35844

Confirmation No. 2474

Group No.: 3761

Examiner: J. Stephens

APPEAL BRIEF UNDER 37 CFR 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Appellants herewith file their Appeal Brief in the above-identified case, pursuant to their Notice of Appeal filed 28 February 2007.

1. REAL PARTY IN INTEREST

The real party in interest is Kimberly-Clark Worldwide, Inc., the assignee of the present application (as recorded at reel 012443, frame 0897).

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I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on

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KCC-2084

MR/S

2. RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any related appeals or interferences with regard to the present application.

3. STATUS OF CLAIMS

Claims 1, 2, 4, 6, 9-12, 14-20, 26-33, 35-43, 57, 58, 60-63, 65, 68-70, and 72-77 are pending in the application, with Claims 1, 2, 4, 6, 9-12, 14-20, 27-33, and 35-42 withdrawn from consideration. Claims 3, 5, 7, 13, 21-25, 34, 44-56, 59, 64, 66, 67, 71, and 78-80 were previously canceled. The present Appeal is directed to Claims 26, 43, 57, 58, 60-63, 65, 68-70, and 72-77, which were finally rejected in an Office Action mailed 04 December 2006.

4. STATUS OF AMENDMENTS

No amendment to the claims was filed subsequent to the most recent final rejection.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to an absorbent material 20 made of multiple high density layers 22, 24 of flexible material having a high superabsorbent concentration to achieve a notably thin product with high fluid absorption capacity. (Page 5, lines 8-11; Figs. 1-3).

In the embodiment recited in independent Claim 26, the absorbent material 20 includes a drum-formed upper layer 22 including pulp fluff and between 20 and 80 wt% superabsorbent material. (Page 13, line 18 – page 14, line 2; page 26, lines 17-18; Figs. 1-3 and 5). The absorbent material 20 also includes an air-laid lower layer 24 including pulp fluff and between 10 and 80 wt% superabsorbent material. (Page 14, lines 2-7; page 27, lines 1-6; Figs. 1-3 and 5). The upper layer 22 comprises a bottom surface area encompassing an entire surface of the upper layer 22 that faces the lower layer 24, the lower layer 24 comprising a top surface area encompassing an entire surface of the lower layer 24 that faces the bottom surface of the upper layer 22, wherein the bottom surface area of the upper layer 22 is greater than the top surface

area of the lower layer 24. (Page 13, lines 11-15). The absorbent material 20 has a thickness in a range of between 0.5 and 7.5 millimeters, and an absorbent capacity between about 14 and 40 grams 0.9 w/v% saline solution per gram of absorbent material. (Page 14, lines 10-11; page 15, lines 15-16). The lower layer 24 has a density equal to a density of the upper layer 22. (Page 14, lines 17-18).

In the embodiment recited in independent Claim 43, an absorbent garment 40 includes a chassis 14 defining a waist opening and first and second leg openings. (Page 12, lines 5-6; page 19, lines 1-9; Fig. 4). The chassis 14 includes at least a liquid-permeable body side liner 42, an absorbent assembly 20, and a substantially liquid-impermeable outer cover layer 44. (Page 19, lines 14-17; page 20, lines 1 and 20-21; Fig. 4). The absorbent assembly 20 includes a single continuous length of a drum-formed upper layer 22 of pulp fluff combined with between 20 and 80 wt% superabsorbent material, and an air-laid lower layer 24 of pulp fluff combined with between 10 and 80 wt% superabsorbent material. (Page 12, line 15 – page 13, line 15; page 13, line 18 – page 14, line 7; page 26, lines 17-18; page 27, lines 1-6; Figs. 1-3 and 5). The lower layer 24 has a density equal to a density of the upper layer 22. (Page 14, lines 17-18). The absorbent assembly 20 has a thickness in a range of between 0.5 and 7.5 millimeters, and an absorbent capacity between about 14 and 40 grams 0.9 w/v% saline solution per gram of absorbent material. (Page 14, lines 10-11; page 15, lines 15-16). The lower layer 24 comprises a plurality of separate pieces placed in desired locations adjacent to the continuous length of the upper layer 22 of the absorbent assembly 20. (Page 13, lines 11-15).

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Claims 26, 57-58, 60-63, and 68 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Everett et al.* (PCT Publication No. WO 99/17695, hereinafter “*Everett*”).

2) Claims 43, 65, 69-70, and 72-77 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Everett* in view of *Osborn, III* (U.S. Patent No. 5,484,430, hereinafter “*Osborn*”).

7. ARGUMENT

I. CLAIMS 26, 57-58, 60-63, AND 68 ARE NOT UNPATENTABLE OVER EVERETT UNDER 35 U.S.C. 103(a).

In the final Office Action, mailed 04 December 2006, the Examiner rejected Claims 26, 57-58, 60-63, and 68 under 35 U.S.C. 103(a) as being unpatentable over *Everett*.

Everett discloses a multi-layer absorbent core. There is no suggestion or motivation to modify the absorbent core in *Everett* to include a bottom surface area of an upper layer that is greater than a top surface area of a lower layer, as recited in Appellants' independent Claim 26.

As explained by Appellants at page 13, lines 11-15 of the subject application, the lower layer can be smaller than the upper layer and may be discontinuous. That is, the lower layer can be cut into a smaller, specifically shaped piece or cut into several pieces and placed in areas most in need of high absorption capacity, *thereby minimizing bulk thickness in areas in which high absorption capacity is not needed*.

Appellants identified the need for absorbent composites that have a high intake ability and reduced bulk in the Background section on pages 2-5, particularly at page 3, lines 7-18.

Appellants agree with the Examiner's previous statement on page 8 of the Office Action mailed 01 December 2004: "*Everett* does not disclose the upper layer has a bottom surface area greater than a surface area of the top surface of the lower layer." Furthermore, Appellants respectfully submit that it would not have been an obvious matter of design choice to provide the upper and lower layers of *Everett* with Appellants' claimed relative dimensions because *Everett* specifically *teaches away* from Appellants' claimed relative dimensions.

More particularly, *Everett* discloses that the upper layer is either the same size or *smaller* than the lower layer (Page 7, lines 31-33; Figs. 1B, 2A, 3A, 4A, and 7-9). Despite the fact that *Everett* teaches modifying the size of the layers in the crotch region to accommodate different size products, there is no suggestion or motivation to modify the *Everett* absorbent structure in such a way as to contradict one of the main

features of the absorbent article, namely an upper layer that is either the same size or **smaller** than the lower layer. As explained at page 7, line 31 – page 8, line 2; page 12, lines 15-25; and at page 14, lines 12-19 of *Everett*, the upper layer is employed as an intake layer, and by making the upper layer cover the entirety of the “target area,” while the lower distribution layer extends under the entirety of the target area and even ***farther*** than the boundaries of the target area, any liquids expelled in the target area are initially absorbed by the upper layer and then distributed downward to the lower layer. Thus, the larger overall surface area of the lower layer provides excess storage space for absorbed liquids, even outside the target area, without including the excess bulk of the upper layer in these regions. In summary, *Everett* minimizes the surface area of the upper layer and **maximizes the surface area of the lower layer**.

In contrast, Appellants’ claimed invention **minimizes the surface area of the lower layer** by using a discontinuous or specifically shaped lower layer, with portions of the lower layer placed only in areas most in need of high absorption capacity. Consequently, the surface area of the upper layer in Appellants’ claimed invention is ***larger*** than the surface area of the lower layer.

Although *Everett* also strives to achieve a comfortable fit, ***the absorbent core in Everett is designed to achieve a comfortable fit in a manner that is inconsistent with, and in direct contrast with, Appellants’ claimed invention***. Thus, *Everett* fails to disclose or suggest all of Appellants’ claim limitations. Absent impermissible hindsight, there is no suggestion or motivation for a person skilled in the art to ***reverse the teachings*** of *Everett* (i.e., to instead form a larger upper layer and a smaller lower layer) to achieve to same balance of intake and distribution of fluids. Consequently, there is no reasonable expectation of successfully achieving Appellants’ claimed absorbent material based on the teachings of *Everett*.

For at least the reasons presented above, Appellants respectfully request the Board to overturn this rejection.

II. CLAIMS 43, 65, 69-70, AND 72-77 ARE NOT UNPATENTABLE OVER EVERETT IN VIEW OF OSBORN UNDER 35 U.S.C. 103(a).

In the final Office Action, mailed 04 December 2006, the Examiner rejected Claims 43, 65, 69-70, and 72-77 under 35 U.S.C. 103(a) as being unpatentable over *Everett* in view of *Osborn*.

There is no suggestion or motivation to modify or combine the inventions of *Everett* and/or *Osborn* to achieve an absorbent garment that includes an absorbent assembly having a drum-formed upper layer and an air-laid lower layer, both layers having equal density, wherein the lower layer includes a plurality of separate pieces placed in desired locations adjacent to the single continuous upper layer of the absorbent assembly.

Everett fails to disclose any discontinuous layers. *Osborn* discloses a ***single discontinuous layer***, which provides the benefit of independent, unconstrained movement by each segment in the Z-direction without constraints imposed by adjacent segments. In contrast, the ***discontinuous lower layer*** in Appellants' claimed invention is provided in combination with a ***continuous upper layer*** in an absorbent assembly. Thus, the upper layer in Appellants' claimed invention may certainly inhibit the movement of each lower layer segment in the Z-direction.

Since the benefits in *Osborn* (i.e., independent, unconstrained movement by each segment in the Z-direction) do not apply to Appellants' claimed invention, and since there is no suggestion in *Everett* to provide a discontinuous layer within an absorbent structure, there is no suggestion or motivation to modify or combine the absorbent structures of *Everett* and/or *Osborn* to achieve Appellants' claimed invention.

As pointed out by the Examiner, the test for obviousness is what the combined teachings of the references would have suggested to those of ordinary skill in the art. The entire absorbent layer in *Osborn* is discontinuous. In contrast, none of the layers in *Everett* are discontinuous. A combination of these references, motivated to modify the *Everett* absorbent structure based on the benefits taught in *Osborn* would result in a discontinuous absorbent structure in which ***both layers 48 and 50 are***

discontinuous. There is no suggestion or motivation in either of the references, alone or in combination, *to produce an absorbent structure in which one layer is discontinuous and the other layer is not*.

As to the Examiner's interpretation of the term "continuous length," the broadest *reasonable* interpretation of this term would be taken in view of the specification. In particular, at page 13, lines 11-15, Appellants state that the lower layer can be smaller than the upper layer and may be discontinuous. Appellants further explain that the discontinuous lower layer can be cut into several pieces and placed in areas most in need of high absorption capacity. This description of discontinuous pieces differentiates the multiplicity of individual pieces from a continuous length. Clearly, the language in Claim 43 ("wherein the absorbent assembly includes a single continuous length of a drum-formed upper layer...and the lower layer comprises a plurality of separate pieces placed in desired locations adjacent to the continuous length of the upper layer") conveys that the upper layer is continuous and the lower layer is discontinuous. The term "continuous" is not superfluous. In fact, the Supreme Court has ruled in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997) that claims must be construed so that all elements have some distinctive meaning.

Regarding Claim 65, which depends from Claim 26, Appellants further point out that neither *Everett* nor *Osborn* alone or in combination, disclose or suggest the bottom surface area of an upper layer that is greater than the top surface area of a lower layer. As pointed out above, *Everett* discloses just the opposite, namely an upper layer that is either the same size or smaller than a lower layer. *Osborn* fails to disclose or suggest any layers of the absorbent core having different surface areas. Thus, *Osborn* fails to overcome the deficiencies of *Everett*. There is no suggestion or motivation in either *Everett* or *Osborn* to produce an absorbent material in which the bottom surface area of an upper layer is greater than the top surface area of a lower layer.


For at least the reasons presented above, Appellants respectfully request the Board to overturn this rejection.

8. CONCLUSION

For the above reasons, Appellants respectfully submit that the rejections posed by the Examiner are improper as a matter of law and fact. Accordingly, Appellants respectfully request the Board to reverse the rejection of Claims 26, 43, 57, 58, 60-63, 65, 68-70, and 72-77.

A check for the fee required by 37 CFR 41.37(a)(2) and 37 CFR 41.20(b)(2), updated pursuant to the Fiscal Year 2007 Fee Schedule, in the amount of \$500.00, is attached hereto. Please charge any additional amount owed, or credit any overpayment, to Deposit Account 19-3550.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Melanie L. Rauch', is written over the typed name.

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CLAIMS APPENDIX

26. An absorbent material, comprising:

a drum-formed upper layer including pulp fluff and between 20 and 80 wt% superabsorbent material;

an air-laid lower layer including pulp fluff and between 10 and 80 wt% superabsorbent material;

the upper layer comprising a bottom surface area encompassing an entire surface of the upper layer that faces the lower layer, the lower layer comprising a top surface area encompassing an entire surface of the lower layer that faces the bottom surface of the upper layer, wherein the bottom surface area of the upper layer is greater than the top surface area of the lower layer; and

wherein the absorbent material has a thickness in a range of between 0.5 and 7.5 millimeters, and an absorbent capacity between about 14 and 40 grams 0.9 w/v% saline solution per gram of absorbent material, and the lower layer has a density equal to a density of the upper layer.

43. An absorbent garment, comprising:

a chassis defining a waist opening and first and second leg openings;

the chassis including at least a liquid-permeable body side liner, an absorbent assembly and a substantially liquid-impermeable outer cover layer;

wherein the absorbent assembly includes a single continuous length of a drum-formed upper layer of pulp fluff combined with between 20 and 80 wt% superabsorbent material, an air-laid lower layer of pulp fluff combined with between 10 and 80 wt% superabsorbent material, the lower layer has a density equal to a density of the upper layer, the absorbent assembly has a thickness in a range of between 0.5 and 7.5 millimeters and an absorbent capacity between about 14 and 40 grams 0.9 w/v% saline solution per gram of absorbent material; and the lower layer comprises a plurality of separate pieces placed in desired locations adjacent to the continuous length of the upper layer of the absorbent assembly.

57. The absorbent material of Claim 26, wherein the upper layer and the lower layer each have a density in a range of between 0.05 and 0.55 grams per cubic centimeter.

58. The absorbent material of Claim 26, wherein the upper layer comprises between 20 and 70 wt% superabsorbent material.

60. The absorbent material of Claim 26, wherein the absorbent material has a thickness in a range of 1 to 7 millimeters.

61. The absorbent material of Claim 26, wherein the absorbent material has an absorbent capacity of at least 16 grams 0.9 w/v% saline solution per gram of absorbent material.

62. The absorbent material of Claim 26, further comprising an intermediate layer between the upper layer and the lower layer, wherein the intermediate layer includes pulp fluff and superabsorbent material.

63. The absorbent material of Claim 26, further comprising an additional layer on top of the upper layer, wherein the additional layer includes pulp fluff and superabsorbent material.

65. The absorbent material of Claim 26, wherein the lower layer comprises a plurality of separate pieces placed in desired locations of the absorbent assembly.

68. An absorbent article comprising the absorbent material of Claim 26.

69. The absorbent garment of Claim 43, wherein the upper layer and the lower layer of the absorbent assembly each have a density in a range of between 0.1 and 0.5 grams per cubic centimeter.

70. The absorbent garment of Claim 43, wherein the upper layer of the absorbent assembly comprises between 20 and 70 wt% superabsorbent material.

72. The absorbent garment of Claim 43, wherein the absorbent assembly has a thickness in a range of 1 to 7 millimeters.

73. The absorbent garment of Claim 43, wherein the absorbent material has an absorbent capacity of at least 16 grams 0.9 w/v% saline solution per gram of absorbent material.

74. The absorbent garment of Claim 43, wherein the absorbent assembly further comprises an intermediate layer between the upper layer and the lower layer, wherein the intermediate layer includes pulp fluff and superabsorbent material.

75. The absorbent garment of Claim 74, wherein the intermediate layer is drum-formed.

76. The absorbent garment of Claim 74, wherein the intermediate layer is air-laid.

77. The absorbent garment of Claim 43, wherein the absorbent assembly further comprises an additional layer on top of the upper layer, wherein the additional layer includes pulp fluff and superabsorbent material.

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EVIDENCE APPENDIX

None

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RELATED PROCEEDINGS APPENDIX

None